

Please amend the Claims as shown below:

Please cancel Claims 1-47, and add new claims as shown below:

Listing of Claims.

Claims 1-47 (cancelled).

48. (Newly Added) An article handling apparatus, comprising:

an article storage area for storing in bin-segments groups of articles to be handled;

an article grasping mechanism adapted to be positionable adjacent the article storage area for selectively grasping articles stored therein and removing them from the article storage area;  
and

a movable article storage structure adapted to be positionable from fully inside the article storage area to at least partially outside the article storage area, the movable article storage structure comprising:

a plurality of guidance apparatuses, each adapted for individually guiding therealong at least two bin-segments of articles to be handled, so as to form a plurality of paraxially aligned article storage columns, wherein

each guidance apparatus includes a receiving device which provides individual coupling to the bin-segments, so as to allow serial loading of the bin-segments into each of the plurality of paraxially aligned article storage columns.

49. (Newly Added) The article handling apparatus of claim 48, wherein the guidance apparatus includes structure for individually guiding bin-segments from one end of an article storage column, along the longitudinal axis of the column, and in a direction toward an opposed dispensing end of the column, which dispensing end is positionable adjacent the article grasping mechanism.

50. (Newly Added) The article handling apparatus of claim 48, wherein at least two of the guidance apparatuses are coupled together along a longitudinal edge thereof using a hinge device, so as form a hinged guidance apparatus, the hinged guidance apparatus having an opened position and a closed position.

51. (Newly Added) The article handling apparatus of claim 50, wherein each guidance apparatus of the hinged guidance apparatus forms two parallel rows of article storage columns, one row along an outward facing side of the hinged guidance apparatus, and another row along an inward facing side of the hinge guidance apparatus, so that when the hinged guidance apparatus is in the open position, access is provided to the inward facing rows of each guidance apparatus.

52. (Newly Added) The article handling apparatus of claim 48, wherein the guidance apparatus additionally includes a mechanism that co-acts with the bin-segments so as to help enforce a FIFO (First-In-First-Out) ordering of the segments in the column.

53. (Newly Added) The article handling apparatus of claim 48, wherein the guidance apparatus additionally includes a mechanism that co-acts with the bin-segments at the dispensing end of said columns, so as to provide a retaining force to said bin-segments to help ensure that the bin-segments remain in said columns during removal of articles from said bin-segments by said article grasping mechanism.

54. (Newly Added) The article handling apparatus of claim 48, wherein the receiving devices comprise openings near the bottom of the guidance apparatus, which openings provide access for respective ones of article storage segments to be admitted into respective ones of the plurality of paraxially aligned article storage columns.

55. (Newly Added) The article handling apparatus of claim 52, wherein said mechanism includes one-way tabs that prevent the segments from being loaded into the column from the dispensing end.

56. (Newly Added) The article handling apparatus of claim 48, wherein flexible dividers are positioned between the columns of segments, so that when a segment is removed from a top of the column, the divider flexes into the space of the column, thereby blocking the insertion of an additional segment into the column from the dispensing end thereof.

57. A method of refilling a vending machine with articles to be dispensed, comprising:

- moving at least partially outside of the vending machine an article storage structure having hinged article storage magazines therein, which article storage structure is adapted to be selectively positionable from fully inside to at least partially outside an article storage area of the machine;

- opening the hinged structure so as to provide access to interior portions of the article storage magazines;

- using prepackaged groups of articles for successively loading respective article storage columns of the article storage magazines with articles while it is at least partially outside the article storage area

- closing the hinged structure, and

- moving the hinged structure into the storage area of the vending machine.

58. A movable article storage structure adapted to be selectively positionable from fully inside to at least partially outside an article storage area of an article handling device, the movable article storage structure comprising:

- a hinged combination of at least two bin-segment guidance apparatuses, each guidance apparatus adapted for individually guiding therealong at least two bin-segments of articles to be handled, so as to form therewith a plurality of paraxially aligned article storage columns, and

- wherein the guidance apparatus of each hinged structure includes a receiving device which provides individual coupling to the bin-segments, so as to allow serial loading of the bin-segments into one end of the plurality of paraxially aligned article storage columns.

59. (Newly Added) The apparatus of claim 58, further including a weight supporting device coupled between the article storage structure and a support for the article handling device, said weight supporting device adapted to provide for movement of the article storage structure into and out of the article storage area.

60. (Newly Added) The apparatus of claim 59, wherein said weight supporting device comprises a ramp.

61. (Newly Added) The apparatus of claim 60, wherein said ramp includes one or more raised walls that serve to guide the article storage structure during its movement into and out of the storage area, which walls also serves to protrude into the storage area and reside therein against the article storage structure, so as to help maintain the article storage structure at a predetermined position within the storage area during operation of the article handling device.

62. (Newly Added) The apparatus of claim 58, wherein the guidance apparatus includes a mechanism that co-acts with the bin-segments so as to help enforce a FIFO (First-In-First-Out) ordering of the segments in the column.

63. (Newly Added) The apparatus of claim 62, wherein said mechanism includes one-way tabs that prevent the segments from being coupled into the column from a place other than at said one end.

64. (Newly Added) The apparatus of claim 62, wherein flexible dividers are positioned between the columns of segments, so that when a segment is removed from a dispensing end of the column which is opposite said one end, the divider flexes into the space of the column, thereby blocking the insertion of an additional segment into the column from the dispensing end of the column.

65. (Newly Added) The apparatus of claim 58, wherein the receiving devices comprise openings near one end of the guidance apparatus, which openings provide access for respective

ones of article storage segments to be admitted into respective ones of the plurality of paraxially aligned article storage columns.

66. (Newly Added) The apparatus of claim 65, where the movable article storage structure comprises a refillable article storage magazine having a 2 by 1+N matrix (where N= 0 or a positive integer), and the openings comprise openings in the bottom of opposed sidewalls that are used to form an outside perimeter for the magazine.

67. (Newly Added) The apparatus of claim 58, further including bin segments having a standardized size for use within the columns of the magazine.

68. (Newly Added) The apparatus of claim 67, further including resizing means which change the interior shape of the bin segment so as to accommodate articles of different size.

69. (Newly Added) The apparatus of claim 68, wherein the resizing means is integrally formed with the bin segments.

70. (Newly Added) The apparatus of claim 69, wherein the resizing means comprises a spacer which when inserted into a bin segment, changes the interior shape/size thereof so as to accommodate the articles of different size.

71. (Newly Added) The apparatus of claim 58, wherein the guidance apparatus includes a track extending in a columnar direction from the one end to a dispensing end of the column which is opposite said one end.

72. (Newly Added) An article handling apparatus having a removable article storage structure from which said article handling apparatus obtains said articles to be handled, said removable article storage structure including:

- a. a guidance apparatus adapted for individually guiding cartridges of pre-packaged groups of articles to be handled, so as to form therewith a plurality of axially aligned article storage columns; the guidance apparatus including,

- b. a receiving device which provides individual coupling to the cartridges, so as to allow serial loading of the cartridges into the plurality of axially aligned article storage columns.

73. (Newly Added) The apparatus of claim 72, wherein the removable article storage structure comprises a refillable article storage magazine having a bottom portion and an elongated upper portion supported by the bottom portion for providing the guidance apparatus.

74. (Newly Added) The apparatus of claim 73, wherein the upper portion comprises an intersecting arrangement of walls, arranged so as to form a matrix of columns.

75. (Newly Added) The apparatus of claim 73, wherein the guidance apparatus comprises a track guidance apparatus mounted in said removable article storage structure so as to extend upward in the columnar direction from the bottom portion of the article storage structure.

76. (Newly Added) The apparatus of claim 75, wherein the track guidance apparatus is free-standing in its extension from the bottom portion.

77. (Newly Added) The apparatus of claim 75, wherein the track guidance apparatus is attached to walls that extend up from the bottom portion in the columnar direction.

78. (Newly Added) The apparatus of claim 73, wherein the receiving devices comprise magnetic couplings that slide on the guidance apparatus.

78. (Newly Added) The apparatus of claim 72, wherein the receiving devices comprise openings near the bottom of the guidance apparatus, which openings provide access for respective ones of the article storage cartridges to be admitted into respective ones of the plurality of axially aligned article storage columns.